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10/541,903

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Michael Broderick

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EXAMINER

MCCALISTER, WILLIAM M

ART UNIT

PAPER NUMBER

3753

MAIL DATE

DELIVERY MODE

10/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---------------------------------------|---|--|
| Office Action Summary | Application No. 10/541,903 | Applicant(s) BRODERICK, MICHAEL | |
| | Examiner WILLIAM MCCALISTER | Art Unit 3753 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 19-38 is/are pending in the application.
- 4a) Of the above claim(s) 30-37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 and 38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The amendment of 7/29/08 is acknowledged. The amendment amended claims 19, 24, 29 and 38. No claims were cancelled and no claims were added. Previously claims 1-18 were cancelled, and claims 30-37 were withdrawn due to an election. Currently claims 19-29 and 38 are pending for consideration.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 19-21, 23, 27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith (US 4,014,510).

Regarding claims 19, 20 and 29, Smith discloses a valve with:

a pressure vessel (77);

a displaceable closure member (56) which, in its closed disposition, is *primarily* maintained in said closed disposition by exposure to the pressure within the pressure vessel such that in a charged condition of the pressure vessel, the pressure within the pressure vessel is active to hold the valve in said closed disposition (see col. 3 lines 16-26),

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the closure member being displaceable from said closed disposition to an open disposition against the pressure within the pressure vessel for release of pressurized fluid from the pressure vessel (col. 2 line 68 to col. 7 line 3), and

an expansion region (reads on member 13, as expansion of a pressurized gas would occur in this region after passing through the orifice created at the interface of the valve member and valve seat).

Regarding claim 21, Smith discloses the closure member to be displaceable between said closed disposition and an open disposition by a double-acting actuator (37).

Regarding claim 23, Smith discloses the closure member to be mounted at one axial end of a spindle (25) extending between the closure member and said actuator.

Regarding claim 27, Smith discloses the closure member to be capable of being mounted for substantially vertical displacement between said closed disposition and an open disposition thereof.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claim 21 above.

Regarding claim 22, Smith discloses a double-acting piston/cylinder (11, 37) actuated by a hydraulic fluid. However, hydraulic and pneumatic fluids were recognized in the art as comparable substitutes for the purpose of actuating pistons, and it would have been obvious at the time of invention to utilize air rather than hydraulic fluid to actuate Smith's piston.

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claim 19 above, in view of Weaver (US 6,302,136).

Smith discloses every limitation of claim 19, but not the substantially metal-to-metal contact of the valve member and seat. However, Weaver teaches that it was known in the art at the time of invention to employ a metal-to-metal interface of a valve member and seat without a sealing element in a valve for handling steam (see abstract). To use

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Smith's valve to control the flow of steam, it would have been obvious to one of ordinary skill in the art at the time of invention to mount the valve member for substantially metal-to-metal contact with a valve seat portion, without interposition of any sealing element.

7. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claim 19 above, in view of Tartaglia (US 5,078,177).

Smith discloses every limitation of claim 19, and a face portion of the valve member, but does not disclose the face portion to be interchangeably secured to the remainder of the closure member. However, Tartaglia teaches a similar valve wherein the face portion of the valve member is interchangeably secured to the remainder of the closure member (see column 3 lines 44-51). To obtain a longer operational life from Smith's valve, it would have been obvious to one of ordinary skill in the art at the time of invention use an interchangeable valve face therewith so that that the valve face can be replaced when worn.

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claim 19 above, in view of Walker (US Patent 3,658,092).

Smith discloses every limitation of claim 19, and a seat portion of the valve body. Smith does not disclose the seat portion being interchangeably secured to the valve body portion in the seat region. However, Walker teaches a similar valve which uses

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interchangeable seat portions (see column 2 lines 62-64). To obtain a longer operational life from Smith's valve, it would have been obvious to one of ordinary skill in the art at the time of invention use an interchangeable valve seat therewith so that that the valve seat can be replaced when worn.

9. Claims 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith as applied to claim 19 above.

Smith discloses all the limitations of claim 19, but not the relative flange sizes of claim 28. However, at the time the invention was made, it would have been an obvious to a person of ordinary skill in the art to utilize a larger flange size at the exit side than at the inlet side where, for instance, pipe size considerations of the system in which the valve is used dictate such a choice.

10. Claims 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Smith.

See the analysis of claim 28.

Response to Arguments

11. Applicant's arguments with respect to the applicability of US Patent 4,023,355 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. The prior art made of record and not relied upon but which is considered pertinent to applicant's disclosure is: US Patent 2,829,664, which discloses a similar poppet valve actuated by a dual-acting piston, but in which the valve member is not primarily held closed by fluid pressure.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **WILLIAM MCCALISTER** whose telephone number is

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(571)270-1869. The examiner can normally be reached on Monday through Friday, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Huson can be reached on 571-272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WILLIAM MCCALISTER/
Examiner, Art Unit 3753

/Stephen M. Hepperle/
Primary Examiner, Art Unit 3753

WM
10/7/08